

Work Order ID 60611

Page 1

Thursday, July 15, 2010 10:25:02 AM

Item ID: D206-642-541

Accept



Setup Start



Revision ID:

Item Name: Replacement Skidtube

Stop



Start Date: 7/15/2010 Start Qty: 1.00



Cust Item ID:

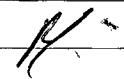
Required Date: 7/22/2010 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan:



Date: 10-7-15 Tooling:

Date:

Run Start



QC:

Date: SPC (Y/N):

Date:

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D3274	D								
IIN-D206-642	Rev M								

100

0.00



DOCUMENT CONTROL

DC

Document Control

Memo

0.00

Photocopy bluefile & type labels per PPP D206-642-541

CHG003

N/A

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run

Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center ID

110

Operation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

Skidtubes

Skidtubes

0.00

Skidtubes

Memo

0.00

****VERIFY AND INSPECT THE MATERIAL PRIOR TO USE****

1- Bend FWD end of tube using bend prog D3274 FWD and foilo 10 as per dwg D3274, cut fwd end of tube with saw table setup D3274.

2- remove fwd indexing ridge as per dwg D3274. Prepare for welding

3- weld fwd cap as per dwg D3274 and QS1004

AR Aluminum Rod Batch: M112507/M114242

4- grind fwd cap weld on top surface only

DP 10-7-20
M 10/17/20
BE 10/07/21
BE 10/07/21

5- Cut AFT end of tube at 170.9" as per dwg D3274 and deburr end.

6-Drill Aft cap pilot hole using DT8025

7 -Cleco DT8025 in position and install pilot hole drill Jig DT8742A,B,C,D.
Drill 3/16" pilot holes as per Dwg D3274

8 -Remove inner indexing ridge on aft end of skidtube as per Dwg D3274 scribe batch #

9 -Open aft end cap holes to Ø0.208" as per Dwg D3274. Deburr aft end.

3
BE 10/07/21

W/O:		WORK ORDER CHANGES					
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Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop


**Sequence ID/
Work Center ID**
**Operation
Description**
**Set Up/
Run Hours**
Tool ID
Tool #
**Plan
Code**
**Accept
Qty**
**Reject
Qty**
**Reject
Number**
**Insp.
Stamp**

120



Chemical Conversion Coat per QSI005 4.1

0.00

1 10/7/12

HandFinish

Memo

0.00

Hand Finishing

130



QC3- Inspect Part Finish

0.00

S10/07/12

QC

Memo

0.00

Quality Control

140



QC5- Inspect part completeness to step on W/O

0.00

S10/07/12

QC

Memo

0.00

Quality Control

(X)

W/O:		WORK ORDER CHANGES					
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Required Date: 7/22/2010 Req'd Qty: 1.00



Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run

Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

150



Skidtubes

Skidtubes

0.00

Memo

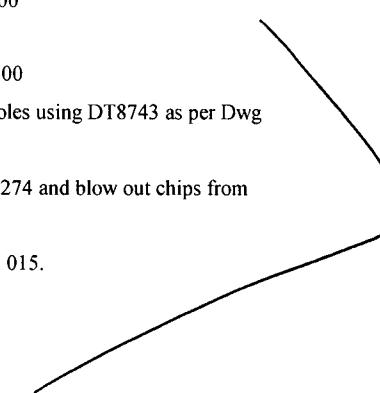
0.00

1-Open Ø0.313" and 0.375" crossbolt spacer holes using DT8743 as per Dwg
D32742-Deburr crossbolt spacer holes as per Dwg D3274 and blow out chips from
inside the tube

3-Bond web in place as per Dwg D3274 & QSI 015.

A/R Sikaflex-291 M115114 Sikaflex expire date: 11-1-30 Start: 10-7-21 Time: 4:15 Finish: 10/7/21 Time: 8:30

(Adhere for 12 hours)



160



QC

QC5- Inspect part completeness to step on W/O

0.00

Memo

0.00

Quality Control

W/O:		WORK ORDER CHANGES					
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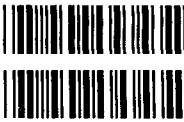
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Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run

Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

170



Skidtubes

Skidtubes

0.00

Skidtubes

Memo

0.00

1-Bend AFT end of tube using bend prog. D3274 AFT as per dwg D3274. Install drop pins in crossbolt spacer holes to maintain web position.

2- DRILL PILOT HOLES FOR WEARPLATES USING D3274-1T2
OPEN HOLES TO .297". Deburr3-DRILL TOE PIN HOLE .640" DIA AS PER DWG USING DT8935 FWD
END OF TUBE
DEBURR INSIDE OF HOLE AS NECESSARY (DO NOT ENLARGE HOLES)
REMOVE ANY FOREIGN OBJECTS INSIDE OF TUBES

4- Countersink crossbolt spacer holes as per Dwg D3274

5- prepare for welding

180



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

L = 2.95"

0.00

L = 4.5"

10/7/26

S
10/8/27

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

190



Skidtubes

Skidtubes

0.00

Skidtubes

Memo
1-Insert D2649 & D3275-1 crossbolt spacers. Weld as per QSI 004 and Dwg D3274. Remember to back drill each hole before welding the other side. Use aluminum rod

A/R Aluminum Rod m112507

BE 10/07/27

3-Grind cross bolt welds flush as per Dwg D3274.

4-Counterbore 5/16" x 0.750" deep as per Dwg D3274 and deburr.

200



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

Memo

0.00

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Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

210



QC10- Inspect visual per QSI004- ground welds

0.00

Swluz128

0.00

QC

Quality Control

220



Pressure Wash per QSI005 4.3

0.00

7/16/28

0.00

HandFinish

Hand Finishing

Memo

230



White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00

Memo

START TIME: 8:30
 OVEN TEMPERATURE: 300°
 FINISH TIME: 9:00

0.00

10/67/28

1

C

10/67/29

W/O:		WORK ORDER CHANGES					
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Customer:

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

240



QC

Quality Control

QC3- Inspect Part Finish

0.00

M

10/09/03

0.00

Memo

1

d

250



HandFinish

HandFinishing

0.00

0.00

M

10/09/03

1

d

Hand Finishing

Memo

1-Install Nut Plate as per Dwg D3274. Apply LPS-3 to Nut Plate and rivets.
A/R□N/A□LPS-3□ 10/09/03

2-Install inserts as per Dwg D3274. Use a drop of Sikaflex inside insert holes a

A/R□□Sikaflex-291 □ 10/09/03✓ Sikaflex expire date: 10/09/03

260



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

Memo

Inspect Nut Plate & Inserts

0.00

m 10 09 02 03

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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Work Order ID 60611

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Customer:

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center ID

270

Operation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

0.00

z7 M 10/09/03

1 Q

HandFinish

Hand Finishing

Memo

0.00

HAND FINISHING RESOURCE #1

1-Install wearpads & gaskets as per Dwg D3274.

2-Install ring as per Dwg D3274

A/R Sikaflex-291 11/11/01Sikaflex expire date: 11/01

3-Inspect for foreign objects as per QSI 024

4-Spray inside of tube on both sides of web with LPS-3

✓ A/R LPS-3 Batch: NIA

5-Install Aft Cap and seal with Sikaflex. Clean excess adhesive.

A/R Sikaflex-291 11/11/01Sikaflex expire date: 11/01

280



QC

QC5- Inspect part completeness to step on W/O

0.00

Memo

0.00

Quality Control

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Customer:

Reference:

Approvals: Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run Start



QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop

Sequence ID/
Work Center ID

290



Packaging

Packaging

Operation
Description

Identify as per dwg & Stock Location: _____

Set Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

PPP 60611

300



QC

Quality Control

QC21- Final Inspection - Work Order Release

0.00

Memo

0.00

W/O:		WORK ORDER CHANGES					
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Picklist Print

Thursday, July 15, 2010 10:25:06 AM

Page 1

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Parent Item: D206-642-541



Parent Item Name: Replacement Skidtube

Start Date: 7/15/2010

Required Date: 7/22/2010

Start Qty: 1.00

Required Qty: 1.00

Comments:

IPP Rev:B 05.09.23 Revised per D206-642 Rev. J KJ/JLM
IPP Rev:C 07-02-23 Added SS Wearplates & Gaskets JLM
IPP Rev:D 07-12-06 replace NAS1515H3L to D3672-1 DD
IPP Rev:E 08-04-17 as per PAR 08-015 DD verified by:EC
IPP Rev:F 08-06-02 add comment DD verified by:EC
IPP Rev:G 08-10-09 revise details DD verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2600-1-190 		Manufactured	No			110	Each	32.0000	1	1		SP 10-7-20	
Extrusion Round 3" 206 				<u>Location</u> LG 47575			<u>Loc Qty</u> 32 32						
D3285-1 		Manufactured	No			110	Each	149.0000	1	1		1 BE 10/07/21	
Cap 				<u>Location</u> LG 52511 52647			<u>Loc Qty</u> 149 74 75						
D3282-041 		Manufactured	No			150	Each	9.0000	1	1		10-7-21	
Float Web (206L/407) 				<u>Location</u> LG 59886			<u>Loc Qty</u> 9 9						

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Start Date: 7/15/2010

Required Date: 7/22/2010

Start Qty: 1.00

Required Qty: 1.00

D2649



Manufactured No

190

Each

69.0000

1

1



Cross Bolt Spacer

Location

LG

Loc Qty

69

Loc Code

B60652

x 2

AE 10/07/27

D3275-1



Manufactured No

190

Each

17.0000

12

12



Crossbolt Spacer

Location

LG

Loc Qty

17

Loc Code

B60653

x 12

AE 10/07/27

CR3212-4-03



Purchased No

250

Each

3,739.000

2

2



Cherry Rivet

Location

ST311

Loc Qty

3739

Loc Code

D3415-041



Manufactured No

250

Each

61.0000

1

1



Nut Plate

Location

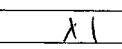
ST056

Loc Qty

61

Loc Code

(33842)



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Start Date: 7/15/2010

Required Date: 7/22/2010

Start Qty: 1.00

Required Qty: 1.00

CCR264SS3-3



Purchased

No

250

Each

540.0000

2

2



M 10/09/03

Cherry Rivet

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
-----------------	----------------	-----------------

ST311	540	
112314	4	
113539	60	
(13973)	476	

ALS4-1032-130



Purchased

No

250

Each

4,506.000

78

78



M 10/09/03

Insert

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
-----------------	----------------	-----------------

PKG11	4190	
(114723)	4190	
ST282	277	
110511	38	
114407	239	
ST381	39	
114654	39	

D3536-15



Manufactured

No

270

Each

13.0000

1

1



M 10/09/03

Gasket

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
-----------------	----------------	-----------------

FP	6	
56055	6	
FP11	7	
(59238)	7	

W/O:		WORK ORDER CHANGES					
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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Thursday, July 15, 2010 10:25:07 AM

Page 4

Work Order ID: 60611



Parent Item: D206-642-541



Parent Item Name: Replacement Skidtube

Start Date: 7/15/2010

Required Date: 7/22/2010

Start Qty: 1.00

Required Qty: 1.00

D3536-23



Manufactured No

270

Each

6.0000

1

1

SL 10109103

Gasket

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP011	6	B60234
58819	6	

D3536-35



Manufactured No

270

Each

11.0000

1

1

SL 10109103

Gasket

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP012	11	B60235
58683	11	

D3536-39



Manufactured No

270

Each

21.0000

1

1

SL 10109103

Gasket

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP12	21	
58215 58571	7	
	14	

D3535-15



Manufactured No

270

Each

10.0000

1

1

SL 10109103

Wearshoe

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP18	10	
59236	10	

D3535-35



Manufactured No

270

Each

7.0000

1

1

SL 10109103

Wearshoe

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP018	7	
59237	7	B60232

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Thursday, July 15, 2010 10:25:07 AM

Page 5

Work Order ID: 60611



Parent Item: D206-642-541



Parent Item Name: Replacement Skidtube

Start Date: 7/15/2010

Required Date: 7/22/2010

Start Qty: 1.00

Required Qty: 1.00

D3535-39



Manufactured No

270

Each

8.0000



1

1

M 10109103

Wearshoe

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
-----------------	----------------	-----------------

FP18

8

8

D3535-23



Manufactured No

270

Each

5.0000



1

1

M 10109107

Wearshoe

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
-----------------	----------------	-----------------

FP21

5

B6023\

D3537-3



Manufactured No

270

Each

20.0000



1

1

M 10109107

Wearpad

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
-----------------	----------------	-----------------

FP17

4

D3537-1



Manufactured No

270

Each

44.0000



9

1

M 10109107

Wearpad

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
-----------------	----------------	-----------------

FP

1

B61201

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Thursday, July 15, 2010 10:25:07 AM

Page 6

Work Order ID: 60611



Parent Item: D206-642-541



Parent Item Name: Replacement Skidtube

Start Date: 7/15/2010

Required Date: 7/22/2010

Start Qty: 1.00

Required Qty: 1.00

AN960C10L

NAS1149C0332
R

Purchased

No

270

Each

0.0000

80

80



washer

AN960C416

NAS1149C0463
R

Purchased

No

270

Each

113.0000

1

1



washer

D3672-1

Manufactured

No

Location

ST346

(100993)

Loc Qty

113

113

Loc Code

x1

2

ml 10109103



Phenolic Washer

AN3C4A

Purchased

No

Location

ST077

(51674
52505)

Loc Qty

1033

33

Loc Code

x2

80

ml 10109102



BOLT

Location

ST350

Loc Qty

1559

114103
114108
114416
114523
114859
114941

501

14

12

2

30

1000

Loc Code

ml 115438

v80

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Thursday, July 15, 2010 10:25:07 AM

Page 7

Work Order ID: 60611



Parent Item: D206-642-541



Parent Item Name: Replacement Skidtube

Start Date: 7/15/2010

Required Date: 7/22/2010

Start Qty: 1.00

Required Qty: 1.00

AN4C5A



Purchased

No

270

Each

513.0000

1

1



41 10109103

BOLT

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
ST346	513	
110552	13	X\
112243	500	

D2646



Manufactured

No

270

Each

94.0000

1

1



41 10109107

Aft Cap

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP-4	85	
57332	85	X\
FP6	9	
52663	9	

D3413-1



Manufactured

No

270

Each

31.0000

1

1



41 10109103

Ring

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
ST473	31	B61322
51586	1	
53446	23	
58524	7	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



SHIP TO
RETURN
ENGINEER
CON ROLL
SUBJECT TO AM
WIT OUT NOTICE
WORK ORDER
NO. *10-715*

RELEASED

07.02.12

DEO ATTACHED

DESIGN	DRAWN BY	DART AEROSPACE USA, INC. PORT HADLOCK, WA
CHECKED	APPROVED	DRAWING NO. D3274
		REV. D SHEET 1 OF 4
DATE	TITLE	SCALE
06.12.19	SKIDTUBE ASSEMBLY	NTS
A	04.03.15	NEW ISSUE
B	04.08.09	MOVE SADDLE HOLE: 42.14 WAS 42.76
C	05.03.16	ADD -043; NEW INSERTS
D	06.12.19	NEW INSERTS, SS WEARSHOE + GASKET

Qty -041	Qty -043	Part Number	Description
X		D3274-041	SKIDTUBE ASSEMBLY
	X	D3274-043	SKIDTUBE ASSEMBLY
1	1	D2600-1-240	EXTRUSION
1	1	D2646	AFT CAP
12	12	D2649	CROSS BOLT SPACER
12	37	D3275-1	CROSS BOLT SPACER
1	1	D3282-041	FLOAT WEB
1	1	D3285-1	CAP
1	1	D3413-1	RING
1	1	D3415-041	NUT PLATE
1	1	D3535-15	WEARSHOE
1	1	D3535-23	WEARSHOE
1	1	D3535-35	WEARSHOE
1	1	D3535-39	WEARSHOE
1	1	D3536-15	GASKET
1	1	D3536-23	GASKET
1	1	D3536-35	GASKET
1	1	D3536-39	GASKET
9	9	D3537-1	WEARPAD
1	1	D3537-3	WEARPAD
78	78	ALS7-1032-130	INSERT (or AKS4-1032-130, ALS4-1032-130, AELS-1032-130)
80	80	AN3C4A	BOLT
1	1	AN4C5A	BOLT
1	1	AN960C416	WASHER
80	80	AN960C10L	WASHER
2	2	CCR264SS3-3	RIVET
2	2	CR3212-4-03	RIVET
2	2	NAS1515H3L	WASHER

GENERAL NOTES:

1. TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
2. DAMAGE TOLERANCE ON FWD BEND:
THERE SHOULD BE NO VISIBLE WRINKLES IN THE BEND FROM THE GROUND TO A HEIGHT OF 7 INCHES ABOVE THE GROUND. IT IS ACCEPTABLE TO POLISH OUT GOUGES UP TO 0.020 DEEP IN THE BENT PORTION OF THE TUBE. A MAXIMUM REDUCTION IN DIAMETER OF 0.150" IS ACCEPTABLE IN THE BENT PORTION OF THE TUBE.
3. ALL HOLES DRILLED ON CENTERLINES.
4. BOND D3282-041 FLOAT WEB INTO D3274-1/3 OUTER TUBE WITH NON-STRUCTURAL SIKAFLX-241/291 ADHESIVE PER DART QSI 015. ENSURE HOLES LINE-UP.
5. WELDING TO BE DONE PER DART QSI 004.
6. FINISH:
- ACID ETCH, ALODINE ASSEMBLY PER DART QSI 005 4.1
- POWDER COAT WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3
7. DRILL Ø0.297 HOLES FOR ALS7-1032-130 INSERTS USING DT3274-1T2 BEFORE FINISH. INSTALL ALS7-1032-130 INSERTS AFTER FINISH. SEAL WEARSHOE BOLTS WITH SIKAFLX-241/291.
8. SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH AND INSTALLATION OF INSERTS. COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER.

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

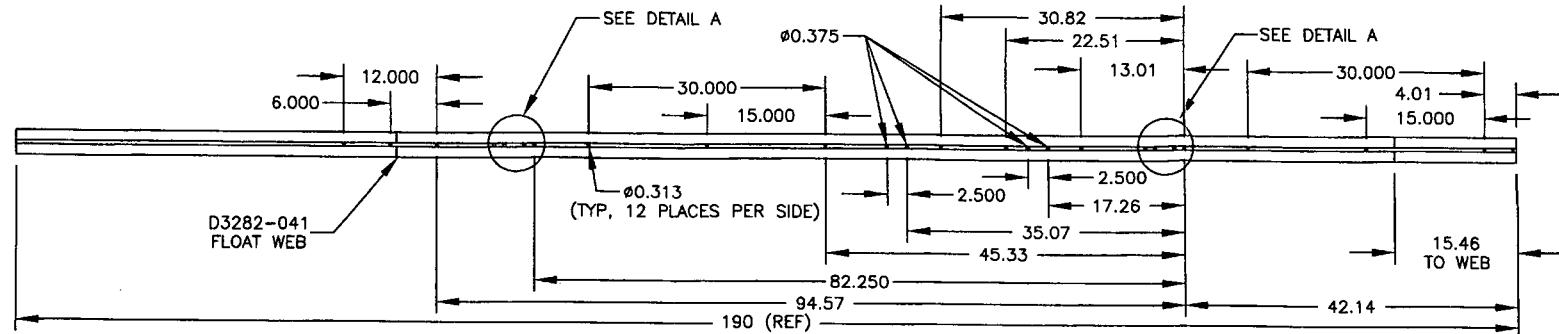
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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

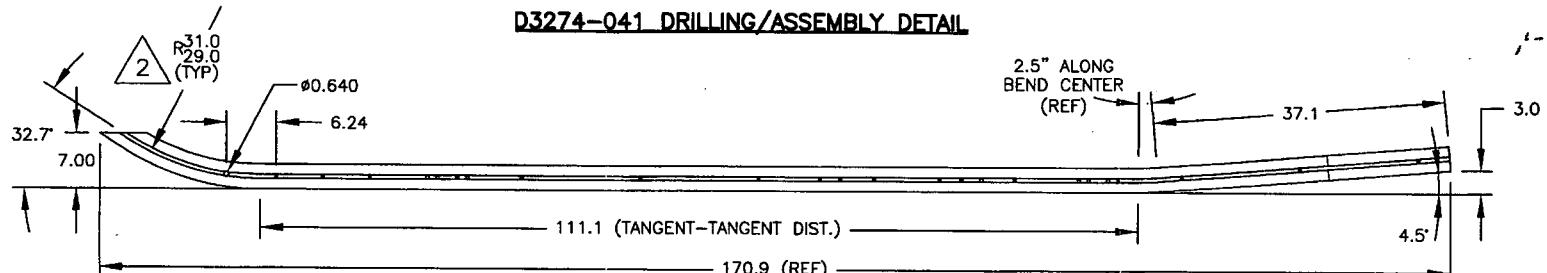
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

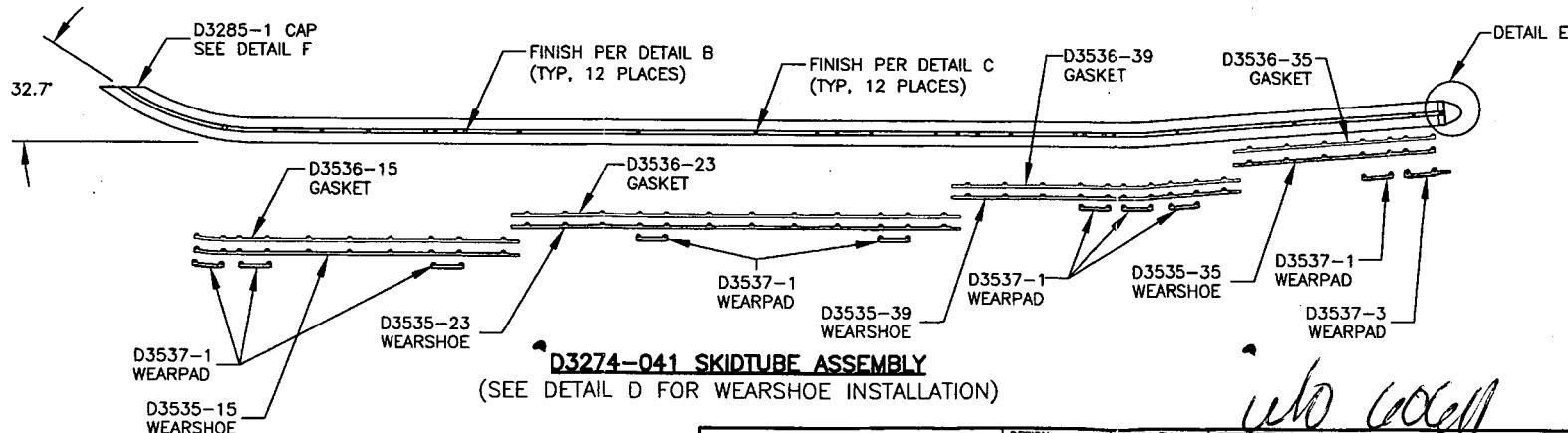
DEO ATTACHED



D3274-041 DRILLING/ASSEMBLY DETAIL



D3274-041 BEND/DRILLING DETAIL



D3274-041 SKIDTUBE ASSEMBLY

RELEASED

07.02.12

#

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DESIGN	DRAWN BY	DART	DART AEROSPACE USA, INC. PORT HADLOCK, WA
CP	#		DRAWING NO. D3274
CHECKED #	APPROVED #		REV. D
DATE 06.12.19	TITLE SKIDTUBE ASSEMBLY		SHEET 2 OF 4 SCALE 1:15

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

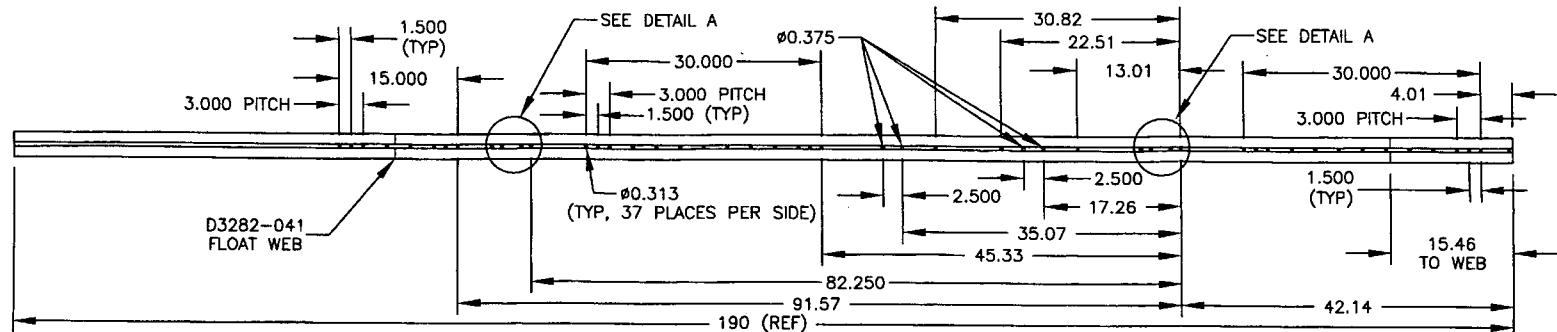
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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

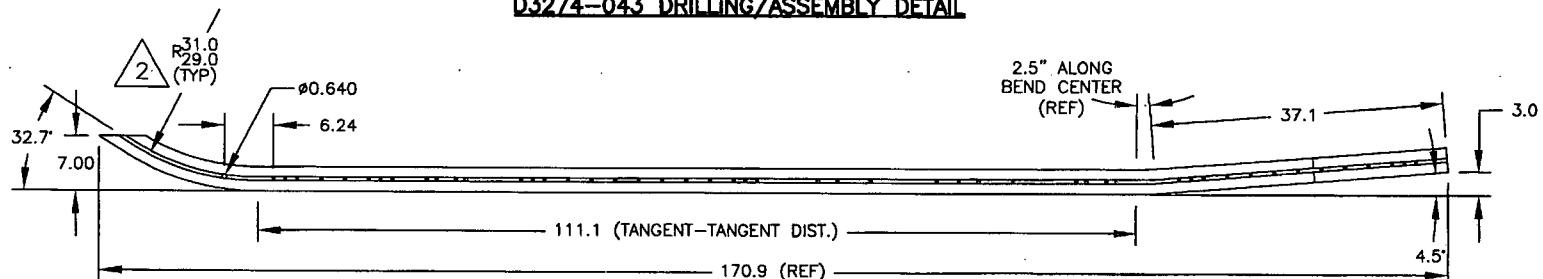
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

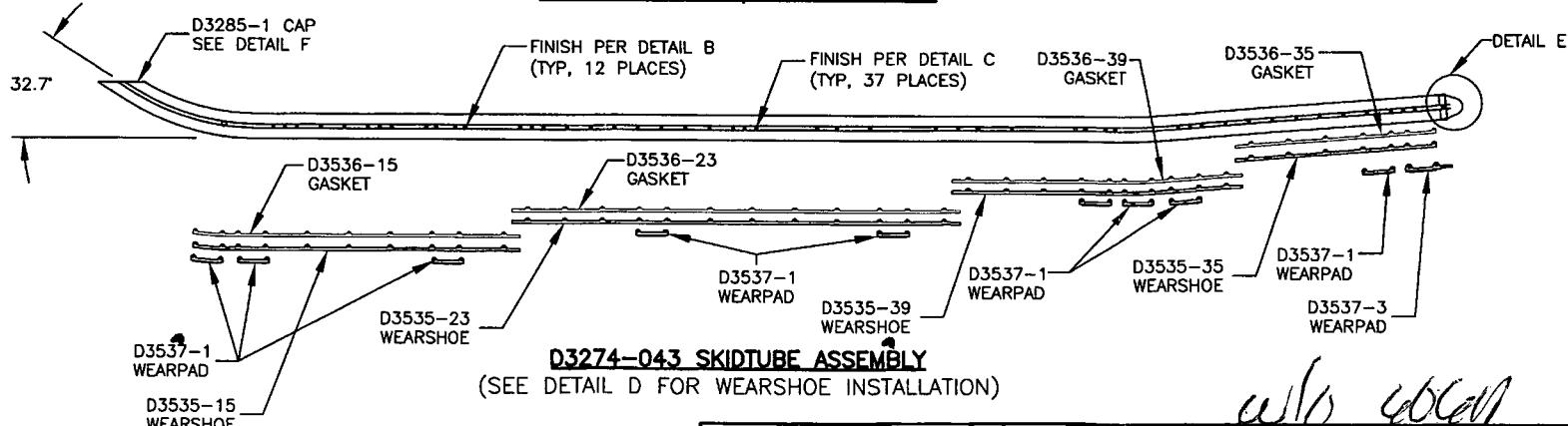
DEO ATTACHED



D3274-043 DRILLING/ASSEMBLY DETAIL



D3274-043 BEND/DRILLING DETAIL



D3274-043 SKIDTUBE ASSEMBLY
(SEE DETAIL D FOR WEARSHOE INSTALLATION)

RELEASED

07.02.12 ~~07~~

ANSWER

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DART AEROSPACE USA INC.

REF ID:

DESK

1

C

DART

DART AEROSPACE USA, INC.
PORT HANCOCK, TX

REV. D

REV. D

SHEET 3 OF 4

SCALE

1.15

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

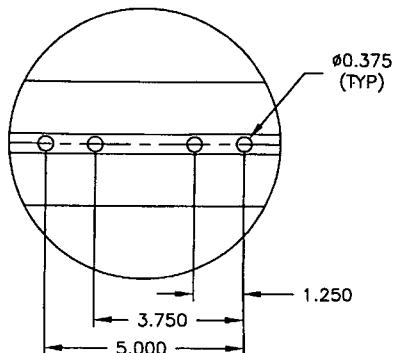
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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

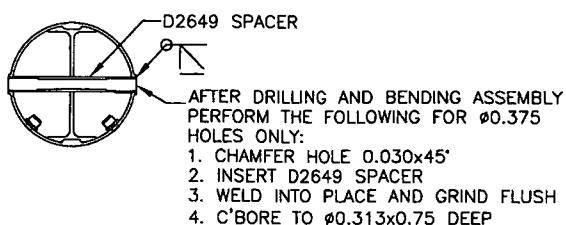
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

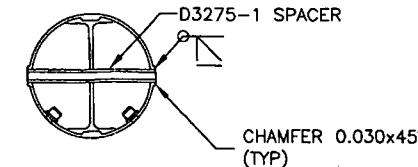
DETAIL A: DRILL DETAIL



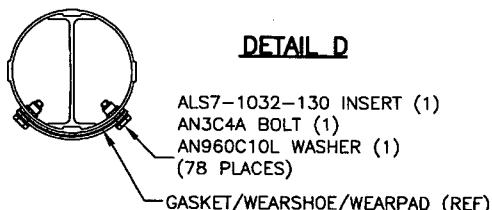
DETAIL B
FOR Ø0.375 HOLES ONLY



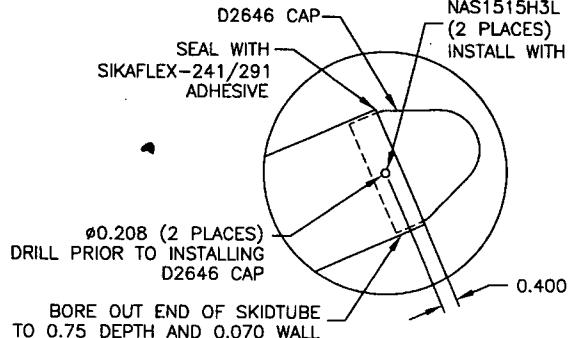
DETAIL C
FOR Ø0.313 HOLES ONLY



DETAIL D



DETAIL E
AN3C4A BOLT (1)
AN960C10L WASHER (1)
NAS1515H3L WASHER (1)
(2 PLACES)
INSTALL WITH SIKAFLEX-241/-291



DETAIL F: END FINISHING DETAIL

DET ATTACHED

RELEASED

07.02.12

W0 60X61

DETAIL F NOTES

1. CUT TUBE LEVEL
2. REMOVE RIDGE ON FWD SIDE
3. LOCATE D3285-1 (TRIM AS NECESSARY)
4. WELD D3285-1 IN PLACE PER DART QSI 004
5. GRIND FLUSH
6. RIVET D3415-041 NUT PLATE IN PLACE

NOTE: MASK THREADS IN D3415-041 PRIOR TO FINISH

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DESIGN	DRAWN BY	DART		DART AEROSPACE USA, INC. PORT HADLOCK, WA
CP	#	APPROVED	#	DRAWING NO. D3274
CHECKED	#	DATE	06.12.19	REV. D SHEET 4 OF 4 TITLE SKIDTUBE ASSEMBLY SCALE 1:3

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

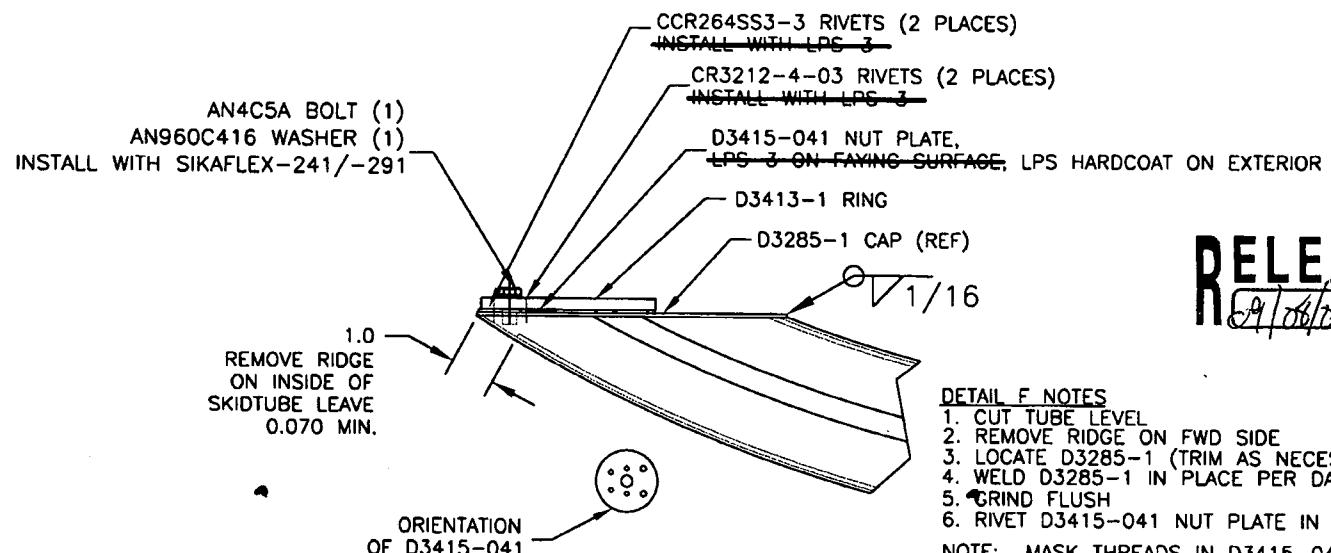
DRAWING NO. D3274	TITLE SKIDTUBE ASSEMBLY	REV. D	DART AEROSPACE USA, INC ENGINEERING ORDER	D.E.O. NO. D3274-D-1	SHEET NO. SHEET 1 OF 1	SCALE NTS
DRAWN <i>JP</i>	CHECKED <i>A</i>	MFG. APPR. <i>AA</i>	APPROVED <i>JAF</i>	DE APPR. <i>TT</i>		
DATE 09.06.17	DATE 09.06.23	DATE 09/06/23	DATE 09/06/23	DATE 09/06/23	DATE 09.06.23	

LPS-3 IS NO LONGER USED DURING ASSEMBLY OF SKIDTUBE.

AMEND NOTE 8: "~~SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES 'LPS 3' AFTER FINISH AND INSTALLATION OF INSERTS.~~
~~COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES 'LPS PROCYON' AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER.~~"

AMEND DETAIL F AS SHOWN:

DETAIL F: END FINISHING DETAIL



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

NO. 235

AWS D17.1.2001
QUALIFICATION TEST RECORD

Name: Berkeley Elliott
Job number: 59780
Part number: D200-642-541
Description: 20G skid tube
Welding Process: Tig Mig
Base material: Aluminium
Current: AC DC

TEST REQUIREMENTS AND RESULTS

Visual: pass fail
Penetration: pass fail

UNACCEPTABLE

Cracks: pass fail
Undercut: pass fail
Pin holes: pass fail
Overlap (cold lap) pass fail
Porosity (surface): pass fail
Coloration: pass fail

Qualifier B. Elliott Date of Test Coupon 10.07.01

Welder Berkeley Elliott Date of Test Coupon 10.07.01

The above named individual is qualified in accordance with AWS D17.1.2001 to weld